enGage® III DIGITAL INSTRUMENTATION

MODEL 3000T

CURTIS

DESCRIPTION

The Curtis enGage® III is a three function, microprocessor based instrument that can be factory or user defined to monitor various functions, including fuel, temperature, pressure, voltage, battery state of charge and maintenance/status.

2 versions: 12VDC, no buttons, no backlighting
12-48VDC, with buttons, with backlighting

APPLICATION

Industrial and commercial vehicles, including: material handling, outdoor power and construction equipment, engine driven stationary devices, commercial cleaning equipment, and golf/ light-on-road. Ideally suited for monitoring scheduled maintenance, warranty and leasing intervals.

QUALITY COMPLIANCE

Manufactured under ISO 9001 certified Quality Management system. UL recognized & CE certified.

FEATURES

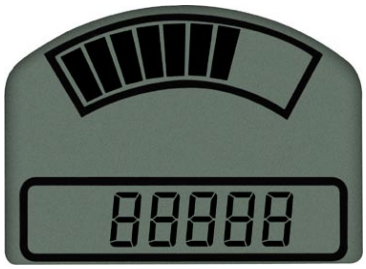
- Integrated dash design allows monitoring of the vehicle with a single, compact panel resulting in enhanced vehicle differentiation and minimized instrumentation expense.
- enGage™ III accepts two sender inputs and displays those functions either simultaneously (one as a bargraph, one numeric) or by toggling (either automatically or manually via the front-panel buttons).
- Multiple functions in one programmable unit:
  – Lower overall stocking requirements.
  – Reduced installation time and labor.
  – Reduced vehicle instrumentation count.
  – Ease of ordering.
  – Volume pricing/purchasing advantages.
- Field programmable maintenance monitor allows dealers and/or users to program maintenance intervals for their specific application.
- Settable hour meter allows replacement of a failed hour meter without loss of total elapsed time.
- Flexible output modes include flashing LCD segments, LED warning icons and FET (0.5A) which allow the equipment designer to define critical parameters and to choose appropriate notification methods.
- Curtis battery monitoring technology means proven algorithm protection capabilities which provide reliable state of charge information.
- Sealed front panel buttons allow easy:
  – Setting of maintenance interval.
  – Setting of battery monitoring profile.
  – Re-setting of maintenance hours.
  – Setting of total hour meter.
  – Toggling the display between multiple functions.
- Clock function allows vehicle operator easy and safe access to time of day status.
- Snap-Fit design and integrated connector lowers installation and production costs and eliminates traditional mounting hardware kits.(Optional mounting bracket avail.)
- Rated IP65 front and rear (AMP version, when connect- ed) providing a sealed, rugged instrument.
- EEPROM non-volatile memory retains usage data with out battery back-up.
- Attractive contemporary look enhances vehicle styling and maximizes readability.
- Reliable solid state design means no moving parts minimizing warranty costs.

MODEL 3000T

MODEL ENCODEMENT

You can select 2 or 3 functions which can be displayed in the top, bar-graph display or the bottom, numeric display. Pick 1 function to be displayed in each or 2 for the top and 1 for the bottom, or 1 for the top and 2 for the bottom.

Top = Bargraph Display



Bottom = Numeric Display

Choose from these functions:

Sender Functions (up to 2)

Fuel
Temperature
Pressure
Tachometer

Non-Sender Functions (up to 2)

Battery Discharge Indicator (BDI)
(Only available on 12 - 48 VDC versions)
Maintenance Monitor
(Only available on 12 - 48 VDC versions, includes Total Hours & Resettable Hours)
Hour Meter
(Only available as a numeric function)
Settable Hour Meter
(Only available on 12 - 48 VDC versions and as a numeric function)

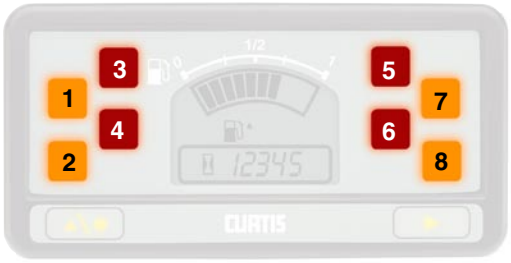
Voltage
(Only available in certain combinations)

To determine your model number and/or to request a free sample, go to www.curtisinst.com and click on the "Configure Your Own Gauge" link in the Products Menu.

WARNING ICON DEFINITION

- Customer selects icon symbol from ISO/SAE standard.
- Colors and layout are fixed as shown. Custom colors or locations require minimum order quantities – please contact factory.

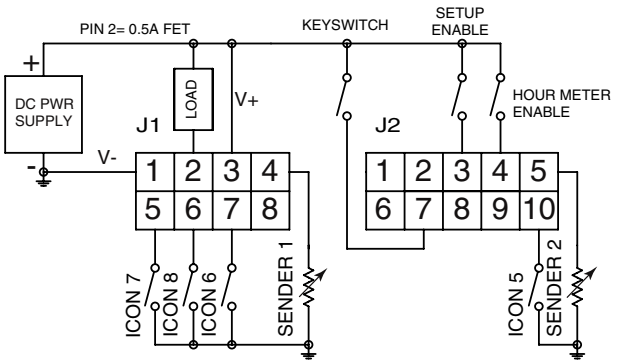
These 4 icon LEDs are programmable. Icons (1 - 4) can be associated to a specific gauge function or customized through the microprocessor, subject to minimum quantity requirements. Icons can also be controlled by switching to V+.



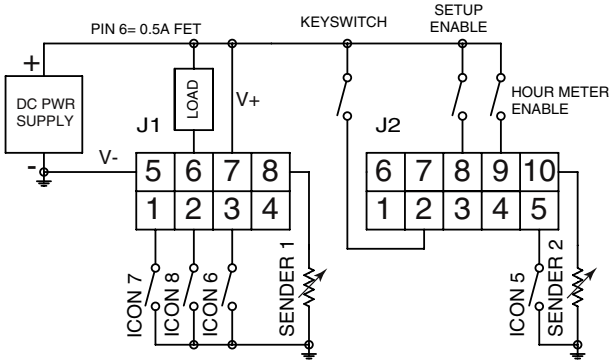
These 4 icon LEDs are Switched to Ground. Icons (5 - 8) are independent of the micro-processor and illuminate only when its corresponding input is switched to ground.

TYPICAL WIRING DIAGRAM

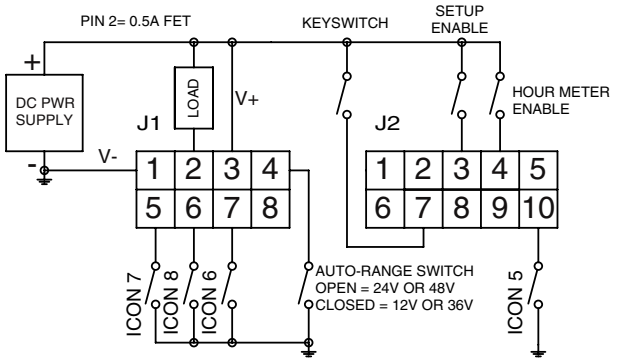
Molex

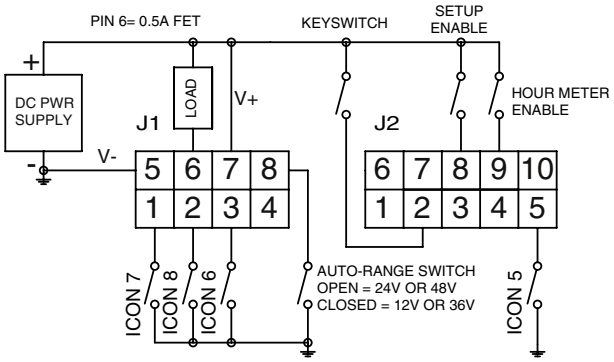


AMP

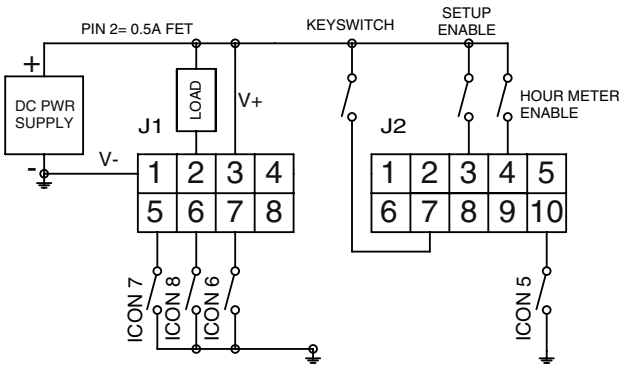


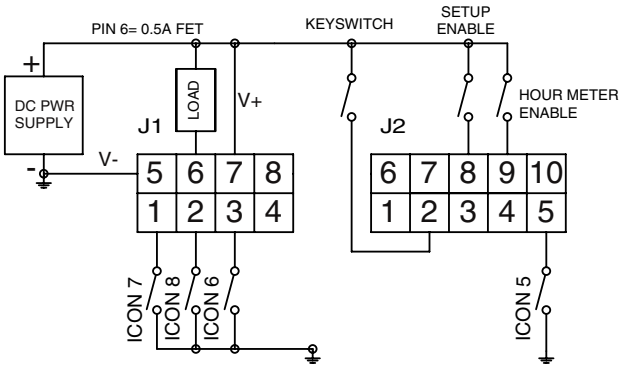
Resistive based sender input (i.e. temp, fuel and pressure).





BDI (with auto-ranging switch)



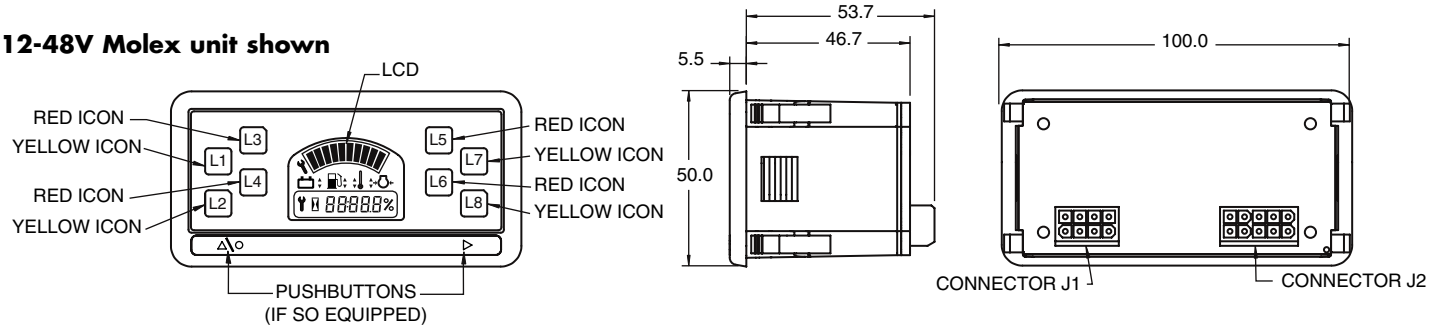


Voltmeter

MODEL 3000T

DIMENSIONS mm

12-48V Molex unit shown



	MOLEX MATING CONNECTORS		AMP MATING CONNECTORS	
	J1	J2	J1	J2
CONNECTOR	MOLEX #39-01-2105	MOLEX #39-01-2085	AMP #794821-1	AMP #794781-1
PIN	MOLEX #39-00-0039		AMP #770904-1	
GASKET			AMP #784772-8	AMP #1-794772-0
WIRE SEAL			AMP #794758-1	

NOTES:
1) CASE MATERIAL: ABS/PC BLEND, BLACK
2) LENS MATERIAL: POLYCARBONATE
3) PANEL CUTOUT SIZE: 45 +.6/-.0 X 92 +.8/-.0
4) ALL SENDER CHARACTERISTICS TO BE DETERMINED

SPECIFICATIONS

- Operating voltages
  12VDC nominal (9 to 15VDC)
  12-48VDC nominal (9 to 60VDC)
- Operating temperature
  -40°C to +85°C
- Storage temperature
  -50°C to +90°C
- Humidity
  95% RH (non-condensing) at +38°C
- Shock
  SAE J 1378 March 83. Amplitude
  44-55 g, half sine, 9-13 ms duration
- Vibration
  SAE J 1378
  Double amplitude of 1.53mm with frequency sweep for
  10-80-10 Hz (20 g max) at 1 minute intervals
- Sealing
  IP-65 (face), IP-40 (rear Molex), IP-65 (rear AMP with connector installed)
- Output signal format (Power MOSFET)
  N channel MOSFET (switches ground side only)
  Programmable; capable of sinking up to 0.5A, maximum
- Adjustable BDI Discharge Profile Range
  Full: 1.80 – 2.30 V/cell (Factory set at 2.04 V/cell)
  Empty: 1.50 – 2.20 V/cell (Factory set at 1.73 V/cell) 100 mV/cell is minimum differential between full & empty
- BDI Open Circuit Reset Level factory set at 2.09 V/cell
- Maximum Current Ratings*
  12VDC Only Models: 155 mA @ 15VDC
  12 – 48VDC Models: 140 mA @ 60VDC
  * Maximum current draw listed based upon all icons illuminated.
  Each icon draws 15mA.

NOTE: BDI, Maintenance Monitor, Settable Hours and Time of Day functions require programming buttons on front display. Buttons NOT available on units rated 12VDC only.

OPTIONS & ACCESSORIES

17633800-01 – AMP Based Installation Kit
Includes a pre-assembled mating connector with over 5" of crimp-connect terminated wires and an installation booklet.

17633800-02 – Molex Based Installation Kit
Includes a pre-assembled mating connector with over 5" of crimp-connect terminated wires and an installation booklet.

17633307 – Mounting Bracket.

12690AMPkit10 – AMP mating connector kit (10 pin)
Includes a connector housing, pins, seals.

12690AMPkit8 – AMP mating connector kit (8 pin)
Includes a connector housing, pins, seals.

WARRANTY

Two year limited warranty from time of delivery.

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